

B¹ at least one detector for detecting fluorescent light emitted by particles in said volume of samples excited by the illumination impinging upon particles in said predetermined volume.

2. A particle analyzing apparatus as in claim 1 in which said capillary channel is in a capillary tube.

3. A particle analyzing apparatus as in claim 2 in which the capillary channel is cylindrical.

4. (Amended) A particle analyzing apparatus as in claim 2 in which the capillary channel is rectangular.

B² 5. (Amended) A particle analyzing apparatus as in claim 2 including an additional detector for detecting all particles flowing along said capillary tube.

6. (Amended) A particle analyzing apparatus for analyzing a sample as in claim 5 in which said additional detector detects light scattered by particles in said predetermined length.

7. (Amended) A particle analyzing apparatus as in claim 5 in which said at least one detector detects a change in impedance caused by said flowing particles.

8. A particle analyzing apparatus for analyzing a sample as in claim 1 in which said detector for detecting fluorescent light includes a lens for intercepting fluorescent light, and a slit located at the focus of the lens for blocking unwanted light from said detector.

B³ 9. (Amended) A particle analyzing apparatus for analyzing a sample as in claim 8 including an additional detector for detecting light scattered by the particles in said volume.

10. A particle analyzing apparatus for analyzing a sample as in claim 6 or 9 in which said particle detector includes a beam blocker for blocking direct light whereby said detector receives only scattered light.

11. A particle analyzing apparatus for analyzing a sample as in claims 6 or 9 in which the particle detector is an off-axis detector.

34. (Amended) A particle analyzing apparatus as in claim 1 in which the predetermined internal cross sectional area of said capillary is such as to cause substantially all particles to singulate as they pass through the illuminated length.

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35. (Amended) A particle analyzing apparatus as in claim 1 including:
means for gathering fluorescent light emitted by particle in said illuminated length,
a beam splitter for receiving said gathered light and reflecting light above a predetermined wavelength and passing light below said predetermined wavelength, and
in which said at least one detector includes:
a first detector for receiving the transmitted light and providing a first output signal for particles tagged to emit light below said predetermined wavelength, and
a second detector for receiving the reflected light and providing a second output signal for particles tagged to emit light above said predetermined wavelength.

36. A particle analyzing apparatus as in claim 35 in which said predetermined wavelength is 620 nm, said light below said predetermined wavelength is 580 nm, and above said predetermined wavelength is 675 nm.

37. A particle analyzing apparatus as in claim 35 including a filter interposed between the beam splitter and each detector for passing light at 580 nm and 675 nm, respectively.

REMARKS

Claims 1-11 and 34-37 are submitted for reconsideration since it is believed that these claims clearly distinguish over the cited prior art. The remainder of the claims, 12-33, have been withdrawn from further consideration as being claims drawn to non-elected inventions. These claims have been made the subject matter of a divisional application.

Applicant has amended the claims to overcome the objections raised by the Examiner pursuant to 35 U.S.C. 112.

Referring now particularly to claim 1, this claim calls for a capillary channel which has first and second ends, and a pump connected to the first end of the capillary channel to draw sample into the second end of the capillary channel and through the channel to cause particles to flow along the capillary channel. The claim further calls for a light source for illuminating a